Texas Energy Partnership

SENATE BILL 12 REPORT

State Fiscal Year September 1, 2007 – August 31, 2008

Date Submitted:

SECO State Energy Conservation Office	Political Subdivision: **San Antonio**		County: **Bexar**
	Contact Name: **Philip Gates**		Title: **Energy Coordinator (Office of Environmental Policy)**
OFFICE OF THE COMPTROLLER TEXAS	Address: **Physical Address: 111 Soledad, Suite 725** *Mailing Address: P.O. Box 839966*	City: **San Antonio** *San Antonio*	Zip: **78205** *78283-3966*
	Phone: 210-207-1444	Fax: 210-207-4396	Email: philip.gates@sanatonio.gov

1) Have you set a goal to reduce electric consumption annually by 5% for six years? ☑ **Yes** ☐ **No**

2) What plans and activities are you implementing to reach your goal? Give a brief description of planned or applied reduction activities. Examples may include but are not limited to: retrofit or replacement of equipment, energy assessments/management/controls/contract/education/staff, and renewable energy applications. Your description will be included in SECO's annual report. Please attach additional pages as needed.

In January 2009, The City of San Antonio completed its **comprehensive sustainability plan, Mission Verde**, which outlines a pathway to making San Antonio a national leader in sustainability. The Mission Verde plan takes an economic development approach to sustainability, focused around energy, and positions San Antonio's city government to be a leader for the community. The City has committed to implementing energy efficiency measures throughout its facilities, where cost effective, and will be using the U.S. EPA's Energy Star Portfolio Manager software tool to **baseline and benchmark progress in energy efficiency**. The City has committed millions of dollars in EECBG funds as well as City funds to support **implementing energy efficiency measures in City facilities**.
Additionally and also in connection with Mission Verde, City Council approved a set of **new building codes to improve the energy efficiency** of City facilities and buildings throughout the San Antonio community. The new building codes will require all new construction to achieve energy efficiency levels 15% greater than outlined in the current building codes as well as prescribed efficiency measures that fit the local climate and geography. The building codes will take effect January 1, 2010 and will be reviewed at least every third year to move San Antonio toward a goal of carbon-neutral buildings by 2030.
The City is also in the final stages of developing a comprehensive and strategic **Facility Sustainability Plan** to implement best management practices for improving conservation in City facilities. Efforts proposed in this plan include technological solutions and building automation, facility maintenance initiatives, an employee awareness campaign, behavioral changes, and long term planning and benchmarking.

In addition to these City-wide efforts, **City Departments** have implemented the following energy efficiency upgrades in their facilities:
The Aviation Department has added a solar panel to a golf cart and is exploring the installation of a large photovoltaic solar energy module at the airport. Window shades were installed at Stinson Airport and window tinting is being explored. Aviation is installing direct digital controls (DDC) to control heating and cooling functions with a wide range of variables in Terminal 1 to achieve greater efficiency. Energy efficient hand dryers were installed in Terminal 2; the dryers work swiftly, yet use unheated air to dry hands. The dryer consume 80% less electricity than warm air hand dryers. T8 or better light ballasts are being installed for energy cost savings. Aviation has ordered fifty light sensors to be installed in break rooms and offices to turn off lights when the area is vacant for over 15 minutes.
Capital Improvements Management Services is incorporating energy efficiency measures *new City facility construction projects* that it manages. Since September 2007: 1) The Convention Center re-roof project replaced approximately seven acres of built up roof with single ply (white) thermoplastic polyolefin roof. The new roof system added three inches of polyisocyanurate insulation to further reduce air conditioning loads on this large facility. 2) The San Pedro Park Branch Library renovation project increased insulation at the ceiling, replaced the inefficient HVAC system, and replaced all the lighting with high efficiency fluorescent light fixtures. 3) The Fire Station renovation projects replaced HVAC systems at eight fire stations with a modern, efficient system. These projects also replaced built up roofs with white single ply modified bitumen roofs, further reducing cooling costs and energy consumption. 4) The Semmes Branch Library received an energy management system and incorporates energy efficienct site orientation. There is natural lighting of interior, with lighting dimmed per outdoor light sensors. The library has a metal skin, reflective roof, shading, and large overhangs. 5) The District 3 Mission Branch Library has a LEED registered project checklist and is a master planned site. 6) The District 9 Stoneoak Branch Library project is pursuing LEED Silver certification and will include translucent polycarbonate panels on the exterior walls. These panels permit natural light to enter the space while reducing heat gain and glare. *New projects moving toward LEED* which have energy efficiency measures: 1) The Plaza de Armas re-roof includes a skylight to clerestory conversion and installation of a cool roof. 2) The Animal Care Facility will have increased ventilation effectiveness in its ventilation systems. The building will incorporate low-e glazing. 3) The City Hall roof will be Energy Star certified with 75% Reflectance and will be a tapered lightweight insulating roof. 4) The Downtown Restroom Project uses low e-glass on storefront and efficient fluorescent lighting. 5) The Igo Branch Library includes a public art and wind turbine combined demonstration. The building envelope is made with highly reflective steel and natural lighting through low-e insulated glass windows is used as well. It incorporates energy efficient equipment and lighting, building design fit to solar orientation, high performance materials, building shading, and large overhangs. 6) The Emergency Operations Center includes high reflectivity coloring, glazing, an upgraded cool roof assembly, a total building energy management system, and efficient lighting. 7) The Carver Library is receiving a PVC Energy Star roof. 8) The Cortez Library includes an energy recovery unit, a new HVAC unit for the addition, and a

Please submit this form by mail, fax, or email to:

Stephen Ross ◆ Texas Energy Partnership ◆ State Energy Conservation Office ◆ Texas Comptroller of Public Accounts ◆
111 East 17th St. Room 1114 ◆ Austin ◆ TX ◆ 78774 ◆ Stephen.ross@cpa.state.tx.us ◆ Office: 1-512-463-1770 ◆ Fax: 1-512-475-2569

PVC Energy Star roof on the addition.
Convention Facilities and the Aviation Department are contracting with an energy services company (ESCO) to audit and upgrade their facilities. A performance contract will be negotiated later this year based upon the results of the energy audit. Additionally, Convention Facilities has installed timers and motion sensors to shut off lights when not in use. Incandescent exit lighting is being replaced with LED lighting at the end of its lifecycle. Heating and cooling schedules have been tightened to conserve energy. Light electrical circuits have been rewired with separate switches to turn off unnecessary lighting. Wall washer lights have been redirected in order to eliminate lighting in other areas. Convention Facilities is utilizing camera system to control functionality of facilities to optimize the building automation system. Exhibit hall exhaust fans are run during move-ins and move-outs instead of HVAC. Weekly event HVAC, lighting, and escalator schedules are coordinated to reduce energy consumption. Missing pipe insulation on steam lines is being replaced to reduce heat loss.
The Department of Community Initiatives will retrofit thirteen buildings with long operating hours. The upgrade from T12 to T8 technology will cut the energy use of the department significantly. Additionally, Community Initiatives has replaced older HVAC units with newer units that run more efficiently and will continue to replace units in the future.
Downtown Operations has replaced eight gasoline-powered "Gator-type" utility vehicles with eight electric-powered models. All light fixtures at its headquarters have been retrofitted with energy efficient ballasts. Also, all light fixtures at the Houston Street & Riverbend parking garages have been upgraded too. Downtown Operations installed three solar-powered compacting trashcans at Alamo Plaza and five at Milam Park.
At Health facilities, staff is ensuring all lights are turned off in vacant rooms, computers are turned off at night, and A/C thermostats are set at 74-76 degrees to conserve energy. Health is installing new roofing as needed, using Energy Star certified products with a reflectivity of 87.5% and an emittance of 95%.
The Library Department has had lighting audits performed and will be upgrading all lighting fixtures in all branches where cost effective, to incorporate T8 and LED lighting technology. The upgrades will be executed in 2009 and are expected to reduce consumption by 1.4 million kWh per year. As library branches are renovated, the current HVAC equipment is being replaced with more efficiency models. When new construction opportunities arise, Library Department installs energy efficient equipment at the outset; this was accomplished at the new Semmes and Maverick Branch Libraries. Numerous windows are included in new facilities to reduce the need for artificial lighting and exterior lighting is designed to turn on/off using photo electric eyes and/or timers. Also, motion sensitive light switches and self-dimming lights are in numerous locations at the new buildings. Trees planted at Central Library continue to mature and when fully grown, the trees will provide shade to the building, reducing the HVAC load.
Parks and Recreation upgraded the Bamberger parking lot with four LED lighting fixtures. The Normoyle facility gym and game room, Southside Lions facility addition, Meadow Cliff facility game room, Jean Yates facility were upgraded to T8 and T5 lighting fixtures. The remainder of Parks and Recreation facilities will be upgraded to T8 lighting fixtures. Solar lighting was installed at Oscar Perez Park and the lights on all sports fields are now on timers. Voelcker Park will have solar panels at the classroom pavilion.
The Police Department upgraded the roofs of its Northwest, West, North, and South Police Substations to Energy Star certified energy saving designs in May of 2008 and did so for the East Police Substation in May 2009. The roofing product used is the most reflective (88%) and emissive (98%) product available on the market and has estimated saving of 35-40% of air-conditioning energy costs. Additionally, the Police Academy and the North, Northwest, West, South, East, and Central substations received lighting upgrades to improve fluorescent T12 technology to T8 technology with estimated annual energy cost savings of 40%. The Police Department plans to upgrade its Police Academy A/C chiller in 2010 and upgrade a total of twenty-five A/C units across five substations from SEER 6-8 units to SEER 16-18 units.
Purchasing and General Services is addressing HVAC deficiencies at Municipal Plaza Building by replacing older HVAC equipment with newer energy conservation equipment, installing new temperature controls and repairing air leaks, and replacing the boiler. City Hall deficiencies are being addressed by installing new temperature controls and improving airflow. An assessment is being performed on other City facilities to identify HVAC energy inefficiencies. Purchasing and General Services is installing sensor switch devices to automatically turn off lights after a set period of non-activity at City Hall and Municipal Plaza and will installing sensors in all future lighting retrofits as they occur. Also, Purchasing and General Service is addressing electrical equipment deficiencies by replacing deficient electrical distribution network with newer energy efficient models and performing an assessment on other City facilities to identify similar deficiencies.

3) Your Subdivision's Detailed 2008 Consumption Data: Instructions: (1) Enter Annual kWh for the recommended period SFY September 1, 2007 to August 31, 2008. Add fields for infrastructure type as needed. (2) Provide building square footage. (3) Save document. (4) Submit to Stephen Ross at SECO using the contact information below.

Notes: (1) This report form reflects the second SB12 reporting cycle. Subdivisions that did not submit in cycle one should also submit a 2007 SB12 baseline report for the recommended period SFY September 1, 2006 to August 31, 2007. (2) If a different reporting timeframe is used, e.g., calendar year, keep consistent between reports. (3) Only report consumption data associated with infrastructure in place at the time of the 2007 baseline report.

Infrastructure Type	Annual Consumption in kWh, Based on City FY: Oct 1, 2007 – Sept 30, 2008 (does not exclude new City facilities)	Gross Square Footage
Buildings & misc	**195,146,152**	Data not available
Water (pumps)	Water distribution managed by SAWS	
Wastewater	Wastewater managed by SAWS	
Traffic Lighting	**3,939,362**	
Street Lighting	**56,821,527**	
Total	**255,907,041**	Data not available

Please submit this form by mail, fax, or email to:

Stephen Ross ◆ Texas Energy Partnership ◆ State Energy Conservation Office ◆ Texas Comptroller of Public Accounts ◆
111 East 17th St. Room 1114 ◆ Austin ◆ TX ◆ 78774 ◆ Stephen.ross@cpa.state.tx.us ◆ Office: 1-512-463-1770 ◆ Fax: 1-512-475-2569